In the Claims:

Claims 1-27 were pending.

Claims 1, 3, 5, 7, 11, 18 and 25 have been amended.

Claims 1-27 are pending.

Listing of Claims:

1. (Currently amended) A method comprising:

determining a distance between a user ~~to boundaries~~ and a boundary of a gaseous volume; and

storing the distance in an alpha channel to arrive at an alpha value.

2. (Original) The method as recited in Claim 1 further comprising blending a color pixel outside the gaseous volume with a color pixel inside the gaseous volume based on the alpha value.

3. (Currently amended) The method as recited in Claim 1, wherein determining a distance comprises adding and subtracting a distance from the user to ~~the~~ a front ~~and~~ or back ~~faces~~ face of the gaseous volume.

4. (Original) The method as recited in Claim 1 wherein storing the distance in alpha channel to arrive at an alpha value comprises calculating a total travel distance through the gaseous volume.

5. (Currently amended) The method as recited in Claim ~~1~~ 2, wherein blending results in a blended pixel and further comprising displaying the blended pixel on a display screen.

6. (Original) The method as recited in Claim 1 wherein the gaseous volume is a three dimensional bounded volume region in a scene.

7. (Currently amended) One or more computer-readable media comprising computer executable instructions that, when executed, perform a method comprising:

determining a distance between a user ~~to boundaries~~ and a boundary of a gaseous volume; and

storing the distance in an alpha channel to arrive at an alpha value.

8. (Original) A system for displaying a volumetric gaseous phenomenon in a scene, comprising:

an alpha channel, configured to receive travel distance information about the gaseous phenomenon;

a fog unit, configured to receive the travel distance information from the alpha channel and covert the information to a fog factor value; and

a blending unit, configured to blend a color of the gaseous phenomenon with a color from the scene based on the fog factor value to produce a pixel.

9. (Original) The system as recited in Claim 8 further comprising a frame buffer configured to store the pixel.

10. (Original) The system as recited in Claim 8 further comprising a frame buffer configured to store the pixel and a display unit configured to render the pixel for display on a screen.

11. (Currently amended) The system as recited in Claim 8 wherein the travel distance information describes ~~is~~ a distance between a user ~~to~~ and a boundary of a gaseous volume.

12. (Original) The system as recited in Claim 8 wherein the system is a flight simulator.

13. (Original) The system as recited in Claim 8 wherein the system is a video game.

14. (Original) A method for rendering volumetric fog or other gaseous phenomena, comprising:

receiving volume object data that defines at least one three-dimensional bounded volume region; and

obtaining travel distance information in an alpha channel, the travel distance information being a function of distances in each three-dimensional

bounded volume region having a face between a respective pixel and a reference point.

15. (Original) The method of claim 14, further comprising converting travel distance information in the alpha channel to obtain a fog factor.

16. (Original) The method of claim 15, further comprising blending scene color and fog color based on the fog factor.

17. (Original) The method of claim 14, wherein the travel distance information comprises total travel distance information, the total travel distance information being equal to the sum of distances through each three-dimensional bounded volume region along a ray between a respective pixel and a reference point.

18. (Currently amended) The method of claim 14, wherein the travel distance information comprises scaled total travel distance information, the scaled total travel distance information being equal to ~~the sum~~ sums of distances through each three-dimensional bounded volume region along a ray between a respective pixel and a reference point, scaled by a scaling value.

19. (Original) A system for rendering volumetric fog or other gaseous phenomena, comprising:

means for receiving volume object data that defines at least one three-dimensional bounded volume region; and

means for obtaining travel distance information in an alpha channel, the travel distance information being a function of distances in each three-dimensional bounded volume region having a front face between a respective pixel and a reference point.

20 (Currently amended) A system for rendering volumetric fog or other gaseous phenomena, comprising:

apparatus for receiving volume object data that defines at least one three-dimensional bounded volume region;

a texture memory configured to store a one-dimensional texture ~~stored in texture memory~~;

a graphics subsystem that obtains travel distance information in an alpha channel, the travel distance information being a function of distances in each three-dimensional bounded volume region having a front face between a respective pixel and a reference point; and

an alpha buffer that stores the obtained travel distance information in an alpha channel for each pixel that covers one or more of the three-dimensional bounded volume regions.

21. (Original) The system of claim 20, wherein said graphics subsystem includes a texture coordinate generator.

22. (Original) T he sy stem o f c laim 2 1, w herein s aid t exture c oordinate generator comprises a texgen.

23. (Previously presented) A computer usable storage medium having stored therein instructions configured to render images having atmospheric effects by causing one or more processors to:

define volume object data corresponding to at least one three-dimensional bounded volume region;

derive one-dimensional texture information;

store the one-dimensional texture information in texture memory;

obtain travel distance information that is a function of distances in each three-dimensional bounded volume region having a front face between a respective pixel and a reference point; and

store data representing the obtained travel distance information in an alpha buffer coupled to an alpha channel for each pixel that covers one or more of the three-dimensional bounded volume regions.

24. (Previously presented) The computer usable storage medium of claim 23, wherein the instructions configured to render images having atmospheric effects stored therein by causing one or more processors to obtain travel distance information further are configured to add intervening back face distance

information to the alpha buffer in a first pass of a multipass routine by calculating one or more back face distance information values $BFDI(P_N)$ for one or more respective points P_N.

25. (Currently amended) The computer usable storage medium of claim 23, wherein the instructions configured to render images having atmospheric effects stored therein by causing one or more processors to obtain travel distance information further are configured to add intervening ~~back~~ front face distance information to the alpha buffer in a first pass of a multipass routine by calculating one or more ~~back~~ front face distance information values ~~$BFDI(P_N)$~~ $FFDI(P_N)$ for one or more respective points P_N.

26. (Previously presented) The computer usable storage medium of claim 23, wherein the instructions configured to render images having atmospheric effects stored therein by causing one or more processors to obtain travel distance information further are configured to effectuate first and second passes of a multipass routine, the second pass including adding intervening back face distance information to the information stored in the alpha buffer for only those pixels inside a volume region of fog by calculating one or more pixel distance information or PDI values $PDI(P_N)$ for one or more respective points P_N.

27. (Previously presented) The computer usable storage medium of claim 23, wherein the instructions configured to render images having atmospheric effects stored therein by causing one or more processors to obtain travel distance

information further are configured to effectuate first, second and third passes of a multipass routine, the third pass including subtracting intervening front face distance information FFDI from the alpha buffer information to provide total travel distance information.